

SCREEN RASTER GENERATION VIA PROGRAMMABLE LOOKUP TABLES

ABSTRACT OF THE DISCLOSURE

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A raster generator sequences through a list of line descriptors to produce a screen raster. The line descriptors include a line-count parameter and a line-type parameter. The line-type parameter defines the characteristics of each type of raster line, and the line-count parameter defines the number of lines of this type occurring in the sequence of lines that define the entire video or image frame. For efficient encoding, the characteristics of each type of raster line is defined in terms of a list of raster pattern types, each raster pattern type being further defined in terms of a sequence of specified durations of particular raster values. The raster generator sequences through the lists of line descriptors, raster patterns, and duration-value pairs, in a nested fashion, thereby generating the screen raster pattern as a sequence of individual raster values that occur for specified durations within each line of each frame. In a preferred embodiment, the raster generator includes a programmable memory for containing each of the parameters that define raster.